Amendments to the Drawings:

The attached sheet of a drawing includes changes to Figure 14. Figure 14 has been changed to more clearly show that the ΔF_{thresh} is actually a lower bound for ΔF and thus has been more clearly labeled ΔF_{thresh}^{LOW}. That portion of the Specification describing Figure 14 has also been amended to conform to Figure 14 and refer to ΔF_{thresh}^{LOW}.

Attachment: Replacement Sheet
Annotated Sheet Showing Changes

Remarks/Arguments

Claims 1, 2, and 4-24 were pending in this application. Within the Office Action, the Specification is objected to; claims 1, 2, 4-10, 17-21, and 24 are rejected under 35 U.S.C. § 112, first paragraph; claims 1-3, 5-10, and 17-24 are rejected under 35 U.S.C. § 102(e); claims 1, 2, 5, 6, 8, and 10 are rejected under 35 U.S.C. § 102(b); and claims 1-10 and 17-24 are rejected under the judicially created doctrine of obviousness-type double patenting.

In the amendments made above, claims 1, 2, 4, 5, 10, 12, 18, 19, and 22-24, the Specification, and Figure 14 have all been amended; claim 17 has been canceled; and claims 25 and 26 have been added. Accordingly, claims 1, 2, 4-16, and 18-26 are pending. In light of the amendments made above and the remarks made below, the Applicant respectfully requests reconsideration.

I. The present invention

A. Operation of the present invention

The present invention is directed to an apparatus for and a method of processing an object, such as a semiconductor wafer. Specifically, the invention is directed to efficiently maintaining a processing volume formed to process the object.

As stated in the Specification, the net force on a plate used to form the processing volume is given by the equation $\Delta F = P2*A2 - P1*A1$. (Specification at page 26, line 20) The Specification then goes on to explain that in some systems, ΔF can change in magnitude and direction as the pressure within the processing volume (P1 or P_{vol}) changes. (*Id.*, page 26, line 27, to page 27, line 14). That is, ΔF can vary non-linearly with P_{vol}. The Specification also explains that ΔF can increase above the value needed to maintain the processing volume. (*Id.*, page 26, lines 10-12 and 25-26).

The invention thus recognizes that in some processing systems (1) ΔF varies non-linearly with P_{vol} and when P_{vol} reaches some values ΔF can increase unnecessarily, that is, to values above what is needed to maintain the processing volume, and (2) since ΔF also varies with P2, any unnecessary increase in ΔF can be offset or reduced by varying P_{seal} to non-linearly "lag" P_{vol} at some time during processing. The Specification recognizes that this non-linear relationship depends in part on the area A2 being larger than the area A1.

But just because A2 > A1 does not mean that P2 inherently varies non-linearly with P1. Indeed, for many ranges of pressure, P2 can equal P1 and the processing volume is maintained. Or, P2 can vary linearly with (e.g., be a constant fraction of) P1 and the processing

volume is maintained. The equation at page 26, line 20, of the Specification merely tells one how to compute ΔF. It does not impose the limitation that P2 varies non-linearly with P1 or lags P1.

Indeed, one prior art system, cited within the Office Action (Fahringer) and described below, uses a sealing pressure that is a fraction of a processing pressure. In other words, the sealing pressure linearly varies with the processing pressure. (Fahringer, col. 5, lines 2-10) The statement in the Office Action that "the non-linear relationship between the sealing pressure and the processing pressure is inherent in the structure of the sealing means of Fahringer" is simply wrong.

Consider the following example: A2 = 2 and A1 = 1. (All units such as lb/in^2 or in^2 are dropped to simplify this and the following equations.) Therefore, $\Delta F = 2P2 - P1$. If P2 = P1 (a *linear* relationship between the two), then $\Delta F = P2$. To keep $\Delta F \geq 0$, and thus maintain a processing volume, a system needs only to keep the sealing (and thus processing) pressure greater or equal than zero. Here, P2 varies linearly with P1 while maintaining the processing volume, so there is no inherent requirement that P2 vary non-linearly with P1 to maintain the processing volume. As described throughout the Specification, however, the processing volume can be maintained *more efficiently* by using embodiments of the present invention.

As support that P2 does not inherently follow P1, the Specification repeatedly describes structure needed to vary P2 so that, at some times during processing, P2 non-linearly lags P1. In one embodiment this structure includes a programmed pressure regulator, described below.

B. Structure of the present invention

Within the Office Action, it is stated that the Specification does not describe a "means for non-linearly varying the sealing pressure." What is more, it is stated that the sealing pressure is not non-linearly varied but instead varies merely due to the different sizes of A1 and A2. In other words, the sealing pressure does not have to controlled in any way. Both of these statements are incorrect.

1. No prior art structure inherently requires that P_{seal} vary non-linearly with P_{vol}.

P_{seal} does not non-linearly vary just because A2 is larger than A1. Indeed a P_{seal} must be generated and, in accordance with the present invention, however, is varied non-linearly with P_{vol} to efficiently maintain a processing volume. Indeed, the Specification describes specific structure to carry this out.

2. Structure for Varying the Sealing Pressure is Described in the Specification.

Under 35 U.S.C. § 112, paragraph 6, the limitation "means for non-linearly varying the sealing pressure" is sufficiently described by the Specification if one skilled in the art can identify any corresponding structure in the Specification that "non-linearly varies the sealing pressure." As described below, the corresponding structure is a pressure regulator for controlling the sealing pressure. This structure is explained, first, by showing that the Specification describes non-linearly varying P_{seal}, and, second, by showing that the pressure regulator described in the Specification performs this function.

First, the limitation of non-linearly varying a sealing pressure is explained at, for example, page 31, lines 18-25 (based on the Preliminary Amendment filed March 24, 2005, and not the amendments made above):

> Next, in the step 1420, P_{vol} and P_{seal} are read and P_{seal} is varied to maintain the processing volume 983. In accordance with one embodiment of the present invention, P_{seal} is varied in accordance with Equation (1) above to efficiently maintain the processing volume 983. That is, P_{seal} can be set to lag P_{vol} and still maintain the processing volume 983 by ensuring that $\Delta F > \Delta F_{thresh}$. It will be appreciated that while, for simplicity, Figure 14 shows the step 1420 being performed after the step 1415, it will be appreciated that the step 1420 will be performed during the step 1415, that is, while a wafer is being processed.

Thus, it is clear that in accordance with the present invention, P_{seal} is varied to lag P_{vol} and maintain the processing volume.

As explained in section V below, the use of Equation (1) can be explained more clearly. In short, Equation (1) is used merely to calculate ΔF. P_{seal} is varied to maintain ΔF within preselected limits, to efficiently maintain a processing volume in accordance with the present invention. The Specification has been amended to better explain this.

The Specification also explains that P_{seal} non-linearly varies with P_{vol}. For example, at page 27, lines 19-23, it is stated in one simplified example:

> ΔF (and thus P_{seal}) can be reduced to conserve energy, while maintaining the processing volume. This non-linear relationship (P_{seal} does not have to track P_{vol}) can be used to reduce the energy input into a processing system used to maintain a processing volume. Energy can be introduced into the processing system at, for example, the input 9444 of the pressure regulator unit 944 of Figure 11.

Here, the Specification explains that P_{seal} not only lags P_{vol} but, during at least part of the processing cycle, is configured to do so non-linearly.

Third, the Specification shows a structure for varying P_{seal} in accordance with the present invention. Figure 11, one embodiment of the invention, discloses a pressure regulator unit 944 coupled to a pressure intensifier 975, which in turn is coupled to a seal-energizing cavity 9501. The Specification, at page 30, lines 22-26, states:

> For example, the pressure regulator unit 944 can be programmed or coupled to a controller that controls the pressure regulator unit 944 to efficiently vary P_{seal} (and thus the sealing force) in accordance with the present invention. The pressure regulator unit 944 can be programmed to generate a pressure that is ultimately translated into the required P_{seal} and thus translated into the sealing force, as described above.

(*See also*, Specification at page 27, lines 22-23; page 29, lines 23-24; page 30, line 27, to page 31, line 5; and page 32, lines 4-5.) One skilled in the art will also recognize that the programmed pressure regulator unit 944 functions automatically, not manually.

The Specification discloses a structure that varies P_{seal} to non-linearly lag P_{vol}. Accordingly, any rejection on the grounds that the Specification does not describe a "means for non-linearly varying" should be withdrawn.

II. The Limitation of a Preselected Range is Patentably Distinct from a Range that May or May not be Met.

Within the Office Action, it is stated that limitations that included the phrase "selected range" merely recited intended use. The Applicant interprets this to rejection to mean that the phrase "selected range" recites intended use because a range has not actually been selected. Claims 10, 18, and 23 have been amended to recite a maintaining a force differential within a "preselected" range. The M.P.E.P. itself cites a case that recognizes that an element that functions at a "preselected range" is patentably distinct from an elements that may possibly function at the range.

In *In re Weiss*, 989 F.2d 1202, 1993 WL 26777 (Fed. Cir. 1993) (unpublished, but cited in M.P.E.P. § 2111.01(II) at 2100-39 (Rev. 5, Aug. 2006)), an Examiner had rejected claims to a shoe with cleats that broke away at a preselected level of stress to avoid injury. The claims were rejected on the grounds that prior art inherently met the claim limitation "because if a large enough level of force is applied, their cleats too will break away from the sole." 1993 WL 26777

at *1. The Federal Circuit held (and M.P.E.P. § 2111.01(II) cites) that while the cleat in the prior art *may* break off at the preselected level, it does not necessarily do so; it is not a result that naturally follows. Thus, the prior art did not inherently disclose the limitation of a means to break off at a *preselected* level. Accordingly, the court allowed the claims over the cited references.

Similarly, claims 10, 18, and 23 all substantially recite "maintaining a force differential *within a preselected range* of values" (italics added). Thus, even if the cited prior art discloses structure that may be maintained within a preselected range of values, none inherently does so. Accordingly, under *In re Weiss* , claims 10, 18, and 23, and thus their dependent claims, are all allowable over the cited references.

III. The Added Limitations Do Not Include New Matter.

Claim 1 has been amended to recite a pressure controller configured to non-linearly vary the sealing pressure to lag a processing pressure generated within the processing volume and to maintain the processing volume during processing. This limitation finds support in the Specification, such as the pressure regulator unit 944 in Figure 11, described above.

Claims 10, 18, 22, and 23 have all been amended to change to phrase "selected range" to "a preselected range." In paragraph 10 of the Office Action, it is recognized that the Specification describes selecting a force differential within a selected range. The limitation of a "preselected range" merely claims what is described in the Specification: using a range that has already been selected and maintaining a force differential within that range. This limitation is not new matter.

The new claim 26 recites a pressure monitor coupled to the processing volume and also to a pressure regulator. Support for this limitation is found in Figure 11 and the related text, which describes a pressure transducer 931 coupled to the pressure regulator unit 944 and also to the processing volume 983.

IV. Objections to the Specification

Within the Office Action, it is stated that the terms P1 and P2 are not uniformly defined throughout the Specification. Specifically, it is stated that P1 is used to refer to a sealing pressure in some places and to a processing pressure in others. Within the Office Action, it is stated that appropriate correction is required.

In response to these objections, the Specification and the Abstract have been amended under 37 C.F.R. § 1.121(e), so that P1 and P2 are used consistently throughout the Specification. Inaccuracies arising from any inconsistent use have also been corrected. Now, throughout the Specification, the Abstract, and the claims, P1 always refers to a processing pressure, P2 always refers to a sealing pressure, and a net force ΔF, such as recited in Equation (1), always refers to ΔF = P2*A2 - P1*A1. No new matter has been added by these amendments.

V. Other Amendments to the Specification

The Applicant has also amended the Specification to use more descriptive terminology. Where the Specification discusses a lower threshold for ΔF, the term ΔF_{thresh} has been replaced with the term ΔF_{thresh}^{LOW}. Where the Specification discusses an upper threshold for ΔF, the term ΔF_{thresh} has been replaced with the term ΔF_{thresh}^{UPP}. This mere rephrasing of terms is not new matter. M.P.E.P. § 2163.07(I) (Rev. 5, August 2006).

The Specification has also been amended to conform some descriptions in the Specification to the remainder of the Specification. (*See* **Amendments to the Specification**, above, amending page 27, line 21; page 30, lines 21-22; and page 31, lines 20-21, based on the Preliminary Amendment filed in this case.) As explained above, throughout, the Specification explains that Equation (1) on page 20 of the Specification is used to calculate ΔF and that the invention lies in maintaining ΔF within a range of values so as to minimize ΔF and thus reduce energy into the system. *See, e.g.*, Specification at page 26, lines 10-12 and 25-26; page 27, lines 20-22; and page 29, lines 21-24. At paragraph 10 of the Office Action, it is stated that the Applicant's arguments that the invention is directed to maintaining a force differential within a selected range are persuasive. By the amendments made above, the Specification at page 30, lines 21-22, and page 31, lines 19-21, has been corrected to better explain that Equation (1) is used merely to describe how ΔF is calculated and that the invention lies in maintaining the processing volume as explained throughout the Specification.

The M.P.E.P. itself allows an applicant to correct errors that are obvious if one skilled in

the art would recognize the appropriate corrections to make. M.P.E.P. § 2163.07(II) (Rev. 5, Aug. 2006). Accordingly, the Applicants believe that minor amendments to include text already found in the application is also allowable and does not include matter. *See, e.g.*, 37 C.F.R. § 1.121(e) (the Patent Office can require amendments to the disclosure "to correct inaccuracies of description and definition, and to secure substantial correspondence between the claims, the remainder of the specification, and the drawings").

VI. Claim Rejections under 35 U.S.C. § 112, first paragraph

Within the Office Action, claims 1, 2, 4-10, 17-21, and 24 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement.

As to claim 1, it is stated that the limitation "range selected from a plurality of ranges" is not sufficiently described in the Specification. Claim 1 has been amended to delete this limitation. Accordingly, the rejection of claim 1 on these grounds is now moot.

As to claim 10, it is stated that the limitation "means for non-linearly varying the sealing pressure" is not described in the Specification. As explained in section **I(B)(2)** above, the Specification does sufficiently describe structure used for non-linearly varying the sealing pressure. Accordingly, the rejection of claim 10 on these grounds should be withdrawn.

As to claim 24, it is stated that the limitation "algorithm to determine the sealing force, the algorithm accounting for non-linear variations between the sealing force, the force generated within the processing volume, and the difference between the sealing force generated within the processing volume," is not described in the Specification. Claim 24 has been amended to delete this limitation. Accordingly, the rejection of claim 24 on these grounds is now moot.

As to claims 23 and 24, it is stated that the limitation "the range is independent of the pressures generated within the processing volume" is not taught or suggested in the Specification. It is also stated that "All of the ranges suggested in the specification are dependent on the pressures generated within the processing volume." Claim 24 does not recite the limitation, so it is rejected because it depends on claim 23. The Applicant traverses this rejection.

As explained above, the Specification teaches an upper bound ΔF_{thresh}^{UPP} on ΔF. If, as in the example given on page 14 in section **I(A)** above, $\Delta F = P1$ (since $P2 = P1$), then ΔF will increase with P1, for all values of P1. In embodiments of the present invention, however, ΔF is kept below ΔF_{thresh}^{UPP} even if P1 goes above some value. In other words, ΔF_{thresh}^{UPP} is independent

of P1. Embodiments of the invention inherently have this property, and the claims can be amended to recite it without introducing new matter. M.P.E.P. § 2163.07(a). Accordingly, the rejection of claim 23 and its dependent claim 24 on the grounds that the claimed limitation recites a range of forces independent of a processing pressure should be withdrawn.

VII. Rejections under 35 U.S.C. § 102

A. Claims 1-3, 5-10, and 17-24

Within the Office Action, claims 1-3, 5-10, and 17-24 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,921,456 to Biberger *et al.* The Applicants respectfully traverse these rejections.

Biberger is directed to a high pressure chamber for processing a semiconductor substrate. In the embodiment of Figure 3, Biberger discloses a hydraulic cavity 58 that, when pressurized, drives a wafer platen 34 to a spacer/injection ring 42 to form a wafer cavity 44. Biberger does not disclose any element configured to automatically non-linearly vary a sealing pressure to lag a processing pressure generated within a processing volume and maintain the processing volume during processing. Nor does Biberger describe keeping a force differential within a preselected range. As explained in section **I(A)** above, this element is not inherent in a structure just because A2 > A1.

Claim 1 is directed to an apparatus for processing a semiconductor wafer. Claim 1 recites, in part, a pressure controller configured to automatically non-linearly vary the sealing pressure to lag a processing pressure generated within the processing volume and maintain the processing volume during processing." As explained above, Biberger does not disclose this element. For at least this reason, claim 1 is allowable over Biberger.

Within the Office Action, it is also stated that the limitation "by maintaining a difference between a sealing force and a force generated within the processing volume within a range selected from a plurality of ranges, the force generated within the processing volume produced by a processing pressure that varies between a vacuum and a supercritical pressure" is an intended use, and Biberger is capable of operating in any range. The Applicant interprets this and similar rejections as stating that "a range *selected* from a plurality of ranges" is intended use and that replacing "selected" with "preselected" cures any rejections based on intended use.

Claims 2, 5-9, and 17-21 all depend on claim 1 and all are accordingly allowable as depending on an allowable base claim. Claim 3 had been canceled in a previous Response, and its rejection is moot.

Claim 10 is directed to an apparatus for processing a semiconductor wafer. Claim 10 recites, in part, means for automatically non-linearly varying a sealing pressure within a seal-energizing cavity to maintain within a preselected range a difference between a sealing force and a force generated within the processing volume, thereby maintaining a processing volume. As explained above, Biberger does not disclose any element for non-linearly varying a sealing pressure or any element for keeping a force differential between a preselected range. Accordingly, claim 10 is also allowable over Biberger.

Claim 22 is directed to an apparatus for processing a semiconductor wafer. Claim 22 recites, in part, means for maintaining the processing volume by reading a processing pressure during processing and automatically generating a sealing pressure that non-linearly lags the read processing pressure. Biberger does not disclose this element. For at least this reason, claim 22 is allowable over Biberger.

Claim 23 is directed to an apparatus for processing a semiconductor wafer. Claim 23 recites, in part, a seal energizer configured to maintain the processing volume by maintaining a difference between a sealing force and a force generated within the processing volume within a preselected range. The range is independent of pressures generated within the processing volume and the pressures generated within the processing volume vary between a vacuum and a supercritical pressure. Biberger does not disclose these element. For at least these reasons, claim 23 is allowable over Biberger.

B. Claims 1, 2, 5, 6, 8, and 10

Within the Office Action, claims 1, 2, 5, 6, 8, and 10 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 2,873,597 to Fahringer. The Applicants respectfully traverse these rejections.

Fahringer is directed to a device for treating strands of material, such as textiles and fabrics, within a tank. Fahringer describes maintaining a pressure differential between a pressure in the tank and a pressure within a compartment through which the strand of material is passed. Referring to its Figure 1, Fahringer discloses a tank 10 coupled by pressure valves 42 and 44 to a sealing unit 17, used to seal a compartment 40. The valve 42 is manually operable, and the valve 44 is a pressure reducing valve. (Fahringer, col. 4, lines 17-25) Fahringer explains that "[t]he

pressure reducing valves 44, 44' would be so adjusted as to maintain only a relatively slight differential pressure between the pressure in the compartments 40 and the pressure in the vessel 10 which would permit only the compressed air and not the steam or hot vapors in the vessel 10 from escaping or seeping through between the nips of the lower sets of sealing rollers 31, 31' [in the sealing unit 40]." *Id.*, col. 4, lines 65-72.

Fahringer explains that controlling the differential pressure between compartments 40 and the vessel 10, the squeezing pressure on fabric F passed between rollers can be controlled. *Id.*, col. 4, line73, to col. 5, line 2. Fahringer gives an example of a pressure in the vessel 10 as 20 pounds and the pressure in the compartment 40 as 10 pounds (*id.*, col. 5, lines 2-10), a constant *linear* relationship between the two. Nowhere does Fahringer describe non-linearly varying a sealing pressure in relation to a processing pressure, as recited in claims 1 and 10. If anything, Fahringer again demonstrates that P_{seal} and P_{vol} can be linearly varied to maintain a processing volume. And while the valve 44 may be capable of manual adjustment, it is not automatically varied as are elements recited in claims of the present invention. Fahringer also does not disclose pressure intensifiers as disclosed in the present invention.

Within the Office Action, it is stated that Fahringer discloses a seal energizer that maintains a force differential according to the formula P1*A1 - P2*A2. It is then stated that a non-linear relationship between the sealing pressure and the processing pressure is inherent in the structure of the sealing means of Fahringer." As explained above, there is nothing inherent in this formula that requires that P2 non-linearly vary with P1. It is also stated that the limitation "by maintaining a difference between a sealing force and a force generated within the processing volume within a range selected from a plurality of ranges, the force generated within the processing volume produced by a processing pressure that varies between a vacuum and a supercritical pressure" is an intended use and that Fahringer is capable of operating within the claimed scope or any other range.

First, as described above, in the structure in Fahringer, P2 does not inherently vary non-linearly with P1. Second, the limitation beginning "by maintaining" has been deleted from claim 1. Accordingly, the rejection of claim 1 is moot and should be withdrawn.

Claims 2, 5, 6, and 8 all depend on claim 1 and accordingly are all allowable as depending on an allowable base claim.

Claim 10 is directed to an apparatus for processing a semiconductor wafer. Claim 10 recites, in part, means for automatically non-linearly varying a sealing pressure within the seal-energizing cavity to maintain within a preselected range a difference between a sealing force and

a force generated within the processing volume, thereby maintaining the processing volume. Fahringer does not disclose this element. Accordingly, claim 10 is allowable over Fahringer for at least this reason.

VIII. Obviousness-Type Double Patenting Rejections

Within the Office Action, it is stated that claims 1-10 and 17-24 are rejected under the judicially created doctrine of obviousness type double patenting as being unpatentable over claims 1-12 of U.S. Patent No. 7,077,917 (the '917 patent). Specifically, it is stated that the '917 patent teaches a means for sealing as recited in the present invention. It is stated that "The size of A1 to A2 is the cause of the non-linear relationship between the sealing pressure and the pressure generated in the processing system. The selected range [of operating forces] is an intended use of the apparatus, and the apparatus of '917 is capable of operating at any of the claimed plurality of ranges." The Applicant traverses this rejection.

First, as explained above, the size of A1 and A2 is not the cause of the non-linear relationship between P2 and P1. Second, the claims of the present invention recite limitations that are not obvious in light of the claims of the '917 patent. For example, none of the claims of the '917 patent recite, "a pressure controller configured to automatically non-linearly vary the sealing pressure to lag a processing pressure generated within the processing volume and maintain the processing volume during processing" (claim 1), or "means for automatically non-linearly varying a sealing pressure within the seal-energizing cavity to maintain within a preselected range a difference between a sealing force and a force generated within the processing volume, thereby maintaining the processing volume" (claim 10), or "means for maintaining the processing volume by reading the processing pressure during processing and automatically generating a sealing pressure that non-linearly lags the read processing pressure" (claim 22), or "a seal energizer configured to maintain the processing volume by maintaining a difference between a sealing force and a force generated within the processing volume within a preselected range, wherein the range is independent of pressures generated within the processing volume and the pressures generated within the processing volume vary between a vacuum and a supercritical pressure" (claim 23). For at least these reasons, the obviousness type double patenting rejection should be withdrawn.

IX. The Response to Arguments

Within the Office Action, under the section titled "Response to Arguments," it is stated that the limitation "maintaining a difference between a sealing force and a force generated within the processing volume within a range selected from a plurality of ranges, the force generated within the processing volume produced by a processing pressure that varies between a vacuum and a supercritical pressure" is broad and "does not really limit the apparatus because in order to function the apparatus must have some range selected from a plurality of ranges." It is also stated that Biberger and Fahringer can operate within an infinite number of ranges and both teach a minimum force and a maximum force, at which the upper and lower elements break.

The Applicant has amended claims 10, 19, and 23 to change "selected range" to "preselected range" to define that the range is actually selected so that the apparatus operates within this range. The Applicant believes that the term "preselected" overcomes a rejection based on intended use. The Applicant also believes that the added limitation "preselected range" adequately distinguishes over the cited references.

Within the Office Action, it is also stated that the limitation "wherein the seal energizer is configured to minimize a non-negative force" in claim 2 is an intended use. The term "minimize a non-negative force" has been changed to "apply a non-negative force" and no longer recites intended use. Moreover, claim 2 is allowable at least because it depends on claim 1, an allowable base claim.

Within the Office Action, it is also stated that the phrase "non-linearly varying a sealing pressure" (claim 10) and "generating a sealing pressure that varies non-linearly with the processing pressure" (claim 22) are not clear because they do not describe how the pressure is applied. Claim 10 has been amended to clearly state that the sealing pressure is applied through a seal-energizing cavity. The limitation in claim 22 (as in claim 10) is recited in a means-for clause and sufficient structure for applying the pressure is found in the embodiments in the Specification that perform the recited function. 35 U.S.C. § 112, paragraph 6.

It is also stated that the Specification does not teach "a sealing pressure that varies non-linearly with the processing pressure." This has been addressed above.

X. CONCLUSION

The Applicant believes that claims 1, 2, 4-10 and 18-26 are in condition for allowance, and allowance at an early date would be appreciated. If the Examiner believes that a telephone conference would expedite prosecution of this application, he is encouraged to call the undersigned at (408) 530-9700.

Respectfully submitted,
HAVERSTOCK & OWENS LLP

Dated: 10-12-06

By: _____
Thomas B. Haverstock
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Attachments

CERTIFICATE OF MAILING (37 CFR§ 1.8(a))
I hereby certify that this paper (along with any referred to as being attached or enclosed) is being deposited with the U.S. Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to the: Commissioner for Patents, P.O. Box 1450 Alexandria, VA 22313-1450

HAVERSTOCK & OWENS LLP

Date 10-12-06

Annotated Sheet

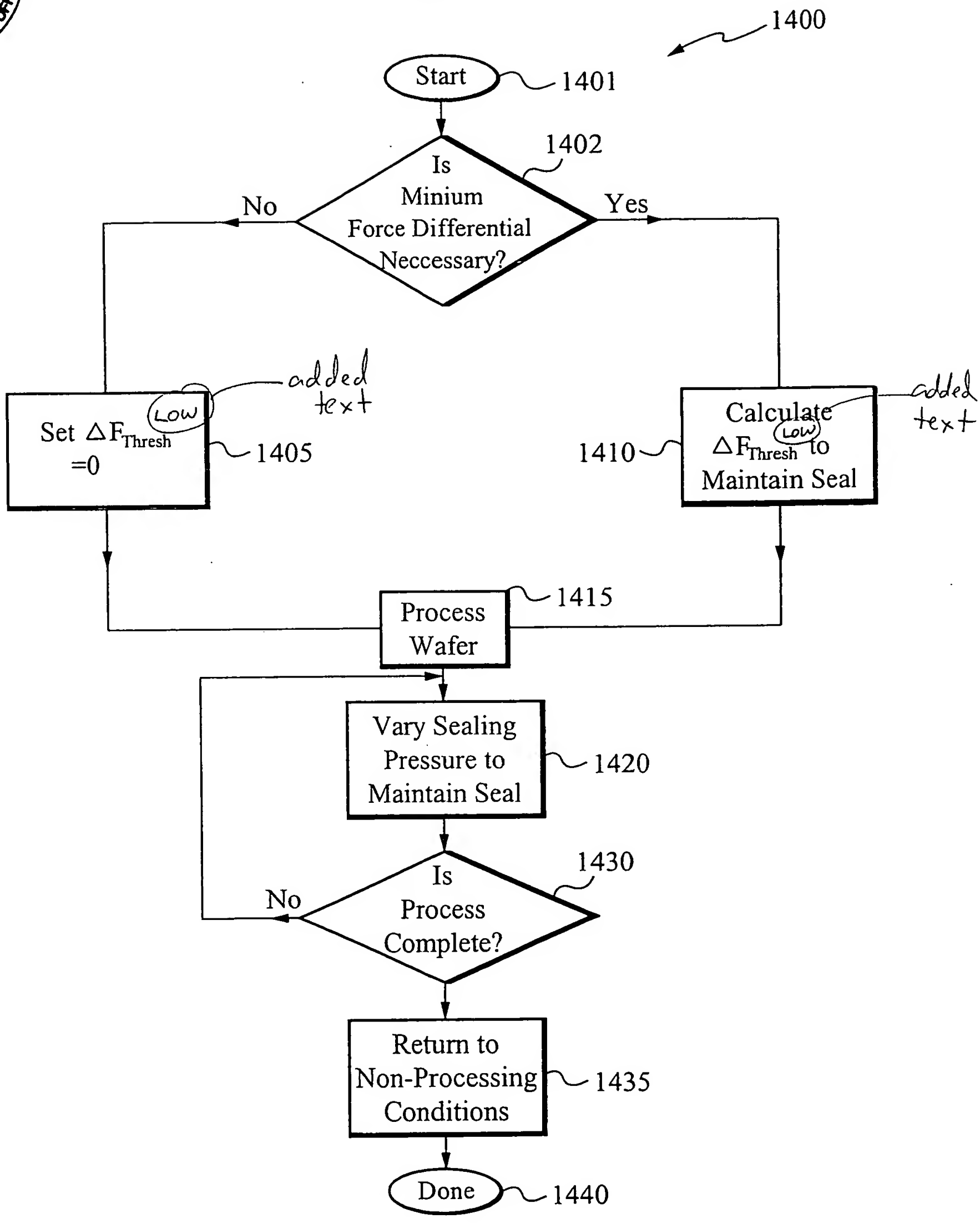

Fig. 14